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09/932,666	08/17/2001	Paul W. Dent	ER-002-US / P14657-US	5094

7590 03/23/2005  
Gregory A. Stephens  
301 Edgemore Avenue  
Apex, NC 27502

EXAMINER

ELAHEE, MD S

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/932,666

Applicant(s)

AUL W. DENT

Examiner

Md S Elahee

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is responsive to an amendment filed on 10/25/04. Claims 2, 7, 10 and 12-14 have been cancelled. Claims 1, 3-6, 9 and 11 are pending.

### ***Response to Arguments***

2. Applicant's arguments mailed on 10/28/04 have been fully considered but are moot in view of the new ground(s) of rejection which is deemed appropriate to address all of the needs at this time.

### **Claim Objections**

3. Claims 1, 6 and 9 are objected to because of the following informalities: acronym (e.g. POS in claim) used in the claim should be written out for clarity. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clifford et al. (U.S. Patent No. 4,746,912) and in view of Marcie (U.S. Patent No. 6,418,203) and further in view of Saylor (U.S. Patent No. 4,313,183).

Regarding claim 1, Clifford teaches establishing a RF link between the alarm signaling unit [i.e., portable wireless communication device] and the receiver [i.e., RF equipped POS device] (abstract; fig.2, 3; col.3, lines 67, 68, col.4, lines 1-6).

Clifford further teaches in the alarm signaling unit:

creating a multi-tone acoustic signal in the form of radio signal [i.e., first digital audio samples] (fig.3; col.3, lines 67, 68, col.4, lines 1-6).

transmitting the radio signal via said radio link (fig.3; col.3, lines 67, 68, col.4, lines 1-6).

decoding [i.e., converting] the first FSK bit sequence [i.e., digital audio samples] to an audible FSK bit sequence [i.e., analog audio waveform] such that the audible FSK bit sequence is the acoustic equivalent of the first FSK bit sequence (fig.1; col.3, lines 30-33, col.4, lines 25-32).

acoustically emitting the audio signal [i.e., analog audio waveform] as an acoustic signal via a loudspeaker (fig.2, 3; col.2, lines 26-62, col.3, lines 67, 68, col.4, lines 1-6).

receiving radio signal [i.e., first digital audio samples] via an RF link (fig.3; col.3, lines 67, 68, col.4, lines 1-6, 33-40).

receiving the acoustic alarm signal [i.e., analog audio waveform] via a microphone (fig.3; col.4, lines 33-40).

However, Clifford does not specifically teach converting the received signal to second digital audio samples. Marcie teaches converting the received signal to second digital audio samples (col.2, lines 45-58). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clifford to convert the received signal to second

digital audio samples as taught by Marcie. The motivation for the modification is to have doing so in order to pass audio data through digital medium.

It not clear whether Clifford in view of Marcie teaches comparing the first digital audio samples against the second digital audio samples to determine if they match. Saylor teaches comparing the first digital audio samples against the second digital audio samples to make confirmation that the FSK sequence represents the proper transmitted output (i.e., determine if they match) (fig.4; col.3, lines 40-66). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clifford in view of Marcie to allow comparing the first digital audio samples against the second digital audio samples to determine if they match as taught by Saylor. The motivation for the modification is to have doing so in order to represent the proper output accurately.

Regarding claim 4, Clifford teaches terminating inherently an exchange of further radio messages between the first and second RF equipped devices if the distance determined is greater than a threshold value.

Regarding claims 6 and 9 are rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Clifford teaches receiving radio signal [i.e., digitized version of the multi-tone acoustic signal in the form of first digital audio samples] via an RF link (fig.3; col.3, lines 67, 68, col.4, lines 1-6, 33-40).

receiving the acoustic alarm signal [i.e., multi-tone acoustic signal] via a microphone (fig.3; col.4, lines 33-40).

converting the received acoustic alarm signal to audio signal (fig.3; col.4, lines 28-40).

determining the time difference between the arrival of the radio signal and the acoustic alarm signal (fig.3; col.4, lines 1-6, 33-40).

determining the distance from the receiver [i.e., RF equipped POS device] based on the known speed of propagation of radio waves, the known speed of sound, and the time difference between the arrival of radio signal and the acoustic alarm signal (fig.2, 3; col.3, lines 3-16, 33-53, 67, 68, col.4, lines 1-40). (Note: speed of propagation of radio waves and speed of sound are well known in art and the speeds are inherently used over here).

6. Claims 3, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clifford et al. (U.S. Patent No. 4,746,912) and in view of Marcie (U.S. Patent No. 6,418,203) and further in view of Saylor (U.S. Patent No. 4,313,183) and further in view of Andreason (U. S. Pub. No. 2003/0008612).

Regarding claims 3, 8 and 11, Clifford in view of Marcie further in view of Saylor does not specifically teach "said radio link is Bluetooth<sup>TM</sup>". Andreason teaches that the radio link is Bluetooth<sup>TM</sup> (page 2, paragraph 0036). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clifford in view of Marcie further in view of Saylor to allow the radio link being Bluetooth<sup>TM</sup> as taught by Andreason. The motivation for the modification is to have doing so in order to communicate between two wireless terminals using short range radio link.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clifford et al. (U.S. Patent No. 4,746,912) and in view of Marcie (U.S. Patent No. 6,418,203) and further in view of Saylor (U.S. Patent No. 4,313,183) and further in view of Aaro et al. (U. S. Patent No. 6,662,020).

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Regarding claim 5, Clifford in view of Marcie further in view of Saylor fails to teach "terminating the performance of a financial transaction". Aaro teaches terminating the performance of a financial transaction (col.2, lines 32-36). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clifford in view of Marcie further in view of Saylor to allow terminating the performance of a financial transaction as taught by Aaro. The motivation for the modification is to have doing so in order to provide ensure the security of the data contained in memory.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Burrell (U.S. Patent No. 6,404,703) teach Method and apparatus for distance measurement and Farrett et al. (U.S. Patent No. 5,541,354) teach Micromanipulation of waveforms in a sampling music synthesizer.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Md S Elahee whose telephone number is (703) 305-4822. The examiner can normally be reached on Mon to Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (703) 305-4895. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. E.

MD SHAFIUL ALAM ELAHEE

March 18, 2005



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